APPENDIX F
Water Quality

Salmonids are dependent on abundant, clean, cool water for their survival. Several water quality components are important to or regulate salmonid habitat and resources: water temperature, dissolved oxygen, pH, total suspended solids (TSS), and specific toxic materials. The quality, delivery and transport of sediments throughout stream channels, lakes, and marine areas play a significant role in salmonid survival and production. Water quality may be altered through point source (i.e., an effluent pipe) or non-point source (i.e., stormwater run off). For the purpose of this report, water quality information is:

> *information collected on water quality parameters such as dissolved oxygen, temperature, and turbidity.*

The Washington Department of Ecology (DOE) monitors waterbodies in the state of Washington for compliance with the Clean Water Act. A substantial amount of information exists for water quality. This information is maintained by federal, state, tribal, and local governments as well as non-governmental organizations. It was not feasible to compile all this information within the project period. However, a number of the water quality databases are identified in the Database Directory.

APPENDIX F Water Quality Impairments which may Affect Salmonids by WRIA

WRIA	Parameter	Frequency
0	Total Dissolved Gas	1
1	Ammonia-N	2
	Dissolved Oxygen	15
	Dissolved oxygen	1
	Fine Sediment	6
	Temperature	6
3	Dissolved Oxygen	3
	Nutrients	3
5	Dissolved Oxygen	1
	Dissolved oxygen	1
	Temperature	3
	Nutrients	4
7	Ammonia-N	2
	Dissolved Oxygen	6
	Temperature	8
	pH	1
	Nutrients	5
	Turbidity	1
8	Dissolved Oxygen	5
	Nutrients	8
9	Ammonia-N	1
	Dissolved Oxygen	3
	Temperature	3
	Exotic Aquatic Plants	1
	Nutrients	2
10	Ammonia-N	1
	Dissolved Oxygen	1
	Instream Flow	2
	Temperature	5
11	Nutrients	3
12	Dissolved Oxygen	1
	Dissolved Oxygen	1
	Nutrients	1
13	Dissolved Oxygen	4
	Temperature	2
	Nutrients	3
14	pH	2
15	Temperature	1
	pH	2
	Nutrients	1
16	Instream Flow	1
17	Fish Habitat	3
	Temperature	1
18	Instream Flow	2
	Temperature	1
19	Fine Sediment	1
	Temperature	5
20	Dissolved Oxygen	3
	Temperature	25
21	Dissolved Oxygen	1
	Temperature	3
22	Temperature	5
	Nutrients	1
23	Dissolved Oxygen	1
	pH	1
	Nutrients	1
24	Dissolved Oxygen	2
	Temperature	5
	pH	1
25	Dissolved Oxygen	1
	Temperature	4
	Nutrients	1
26	Dissolved Oxygen	2
	Temperature	10
	Nutrients	1
27	Temperature	4
28	Chlorine	1
	Dissolved Oxygen	7
29	Temperature	4
30	Instream Flow	6
	Temperature	3
32	Chlorine	1
	Chloronated Hydrocarbons	1
	Instream Flow	3
	Temperature	1
33	Dissolved Oxygen	1
34	Ammonia-N	4
	Chlorine	1
	Dissolved Oxygen	3
	Temperature	1
	Ammonia-N	1
	Nutrients	1
35	Pesticides	1
	Temperature	3
36	Dissolved Oxygen	3
	Temperature	1

APPENDIX F Water Quality Impairments which may Affect Salmonids by WRIA

WRIA	Parameter	Frequency
37	Ammonia-N	2
	Dissolved Oxygen	3
	Instream Flow	1
	Pesticides	2
	Temperature	1
38	Instream Flow	1
	Temperature	15
39	Ammonia-N	1
	Dissolved Oxygen	2
	Instream Flow	5
	Pesticides	3
	Temperature	28
	pH	1
41	Dissolved Oxygen	5
	Temperature	6
42	Dissolved Oxygen	1
43		
45	Dissolved Oxygen	4
	Instream Flow	3
	Temperature	5
46	Instream Flow	1
47	Dissolved Oxygen	1
	Metals	2
	pH	1
48	Instream Flow	9
	Temperature	1
49	Dissolved Oxygen	3
	Instream Flow	1
	Temperature	1
52	pH	1
53	Ammonia-N	1
54	Ammonia-N	1
	Temperature	1
55	Dissolved Oxygen	2
	Temperature	1
56	Dissolved Oxygen	1
57	Nutrients	1

WRIA	Parameter	Frequency
58	Temperature	2
59	Ammonia -N	1
	Dissolved Oxygen	4
	Nutrients	1
60	Dissolved Oxygen	4
	pH	4
61	Dissolved Oxygen	2
	Temperature	1
	pH	2
62	Dissolved Oxygen	1
	Pesticides	1
	Temperature	2
	pH	2